



Module 7



STEP 1

Initial Problem Identification

OBJECTIVES:

The module will discuss the following:

- Who are non-Federal sponsors?**
- Where do sponsors come from?**
- What are the types of problems we are asked to help solve?**

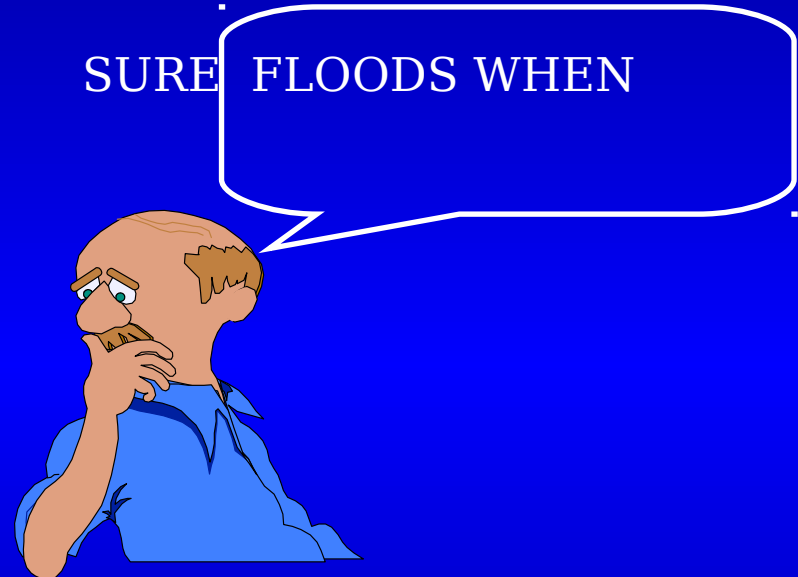


PROBLEM IDENTIFICATION

- WHO ?
- WHERE ?
- WHAT ?
- HOW ?



The WHO Part ?



- ▮ Problem is perceived by local interests
- ▮ Local Interests Non-Federal Sponsor
- ▮ Non-Federal Sponsor requests Corps Assistance

WHO CAN BE A NON-FEDERAL SPONSOR?

A sponsor is...an entity that has the legal and financial capability to provide the cash and real estate requirements needed for a



Who can be a Non-Federal Sponsor?

SPECIFICALLY A SPONSOR CAN BE:

State

▮ County

▮ City or Township

▮ Borough

▮ Native American Tribe

▮ Port Authority

▮ Water District

▮ Levee Boards

▮ River Basin Authority

▮ Non-Profit Entities (with the consent of the affected local government)



REQUEST LETTER:

**Office of the Mayor
Honorable Terry Stratton
City of Fludalot
2323 Wetland lane
Fludalot, Louisiana 98277**

**Colonel Bruce R. Sexauer
District Engineer
U.S. Army Corps of Engineers
P.O. Box 3755
Noflod, Kentucky 22222**

Dear Colonel Sexauer:

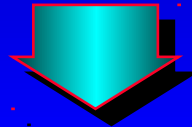
This letter is to seek the assistance of the U.S. Army Corps of Engineers in constructing levees and floodwalls in the greater Fludalot metro area. We get flooded frequently, there are no ordinances or laws which might affect the acceptability of such a project. We look forward to working with you.

**Sincerely,
/s/**

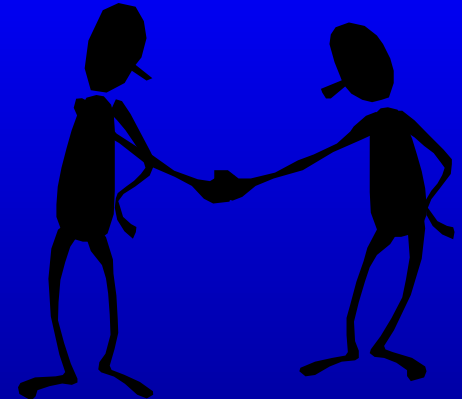
**CC: Honorable Roger Setters, U.S. Senate
Honorable LetMon Lee, U.S. Senate
Honorable Cathy Shuman, House of Representatives**

**See Partnership Kit for more
info**

Non-Federal Sponsor & Corps



- ❑ **Non-Federal sponsor is a “Partner” during the process.**
- ❑ **Corps is customer oriented:**
 - ❑ **“Customer Care”**
 - ❑ **“Customer Friendly”**
 - ❑ **“Meet the needs of the Customer”**
- ❑ **Don’t make unrealistic promises, be “upfront” on Corps limitations.**
- ❑ **Remember...you work for the Administration!**



Where do Potential Sponsors Come From ?

- ▮ **Business Development/Outreach of Corps of Engineers' program authorities and technical expertise**
- ▮ **"Hi, I'm from the Federal government and I'm here to help you."**
 - ▮ **Each District has a different approach!**
 - Partnering/Relationship Building**
 - Brochures**
 - Home Page**
 - Presentations/Community Relations**
 - Involvement with government agencies**
 - Congressional delegation**



The WHERE Part ?



DIFFERENT PLACES.... DIFFERENT PROBLEMS!

Types of Problems Can Vary Based On
Geography *Climate*
Land Use





Restoration - Wetlands

**Kissimmee River,
FL**



**Lackawanna River,
PA
Acid Mine Drainage**



**Smith Island,
MD**



17th Street Floodwall
Flood Levee & Floodwall Failure



Port of Houston, TX
Navigation

The WHAT Part ?



- ▮ The Corps assists in various types of water resources problems and opportunities.
- ▮ REMEMBER...certain missions are considered

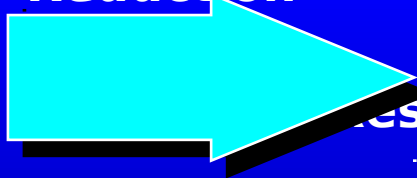


PRIORITY

High Priority Missions:

Commercial Navigation

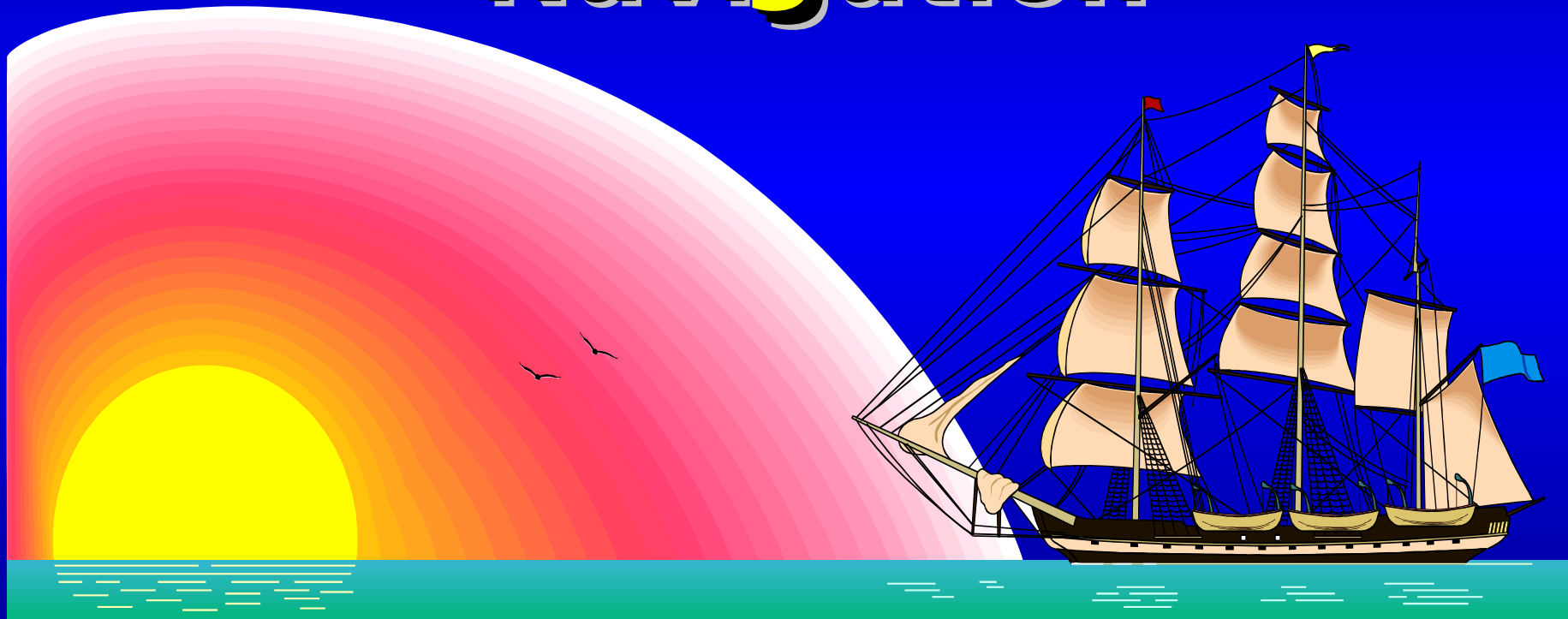
**Flood Risk Management & Coastal Storm Damage
Reduction**



Restoration

Watershed Planning

Commercial Navigation





**Canaveral Harbor,
FL**

**Dresden Island Lock &
Dam
Illinois River**



**John T. Myers Locks &
Dam
Illinois River**



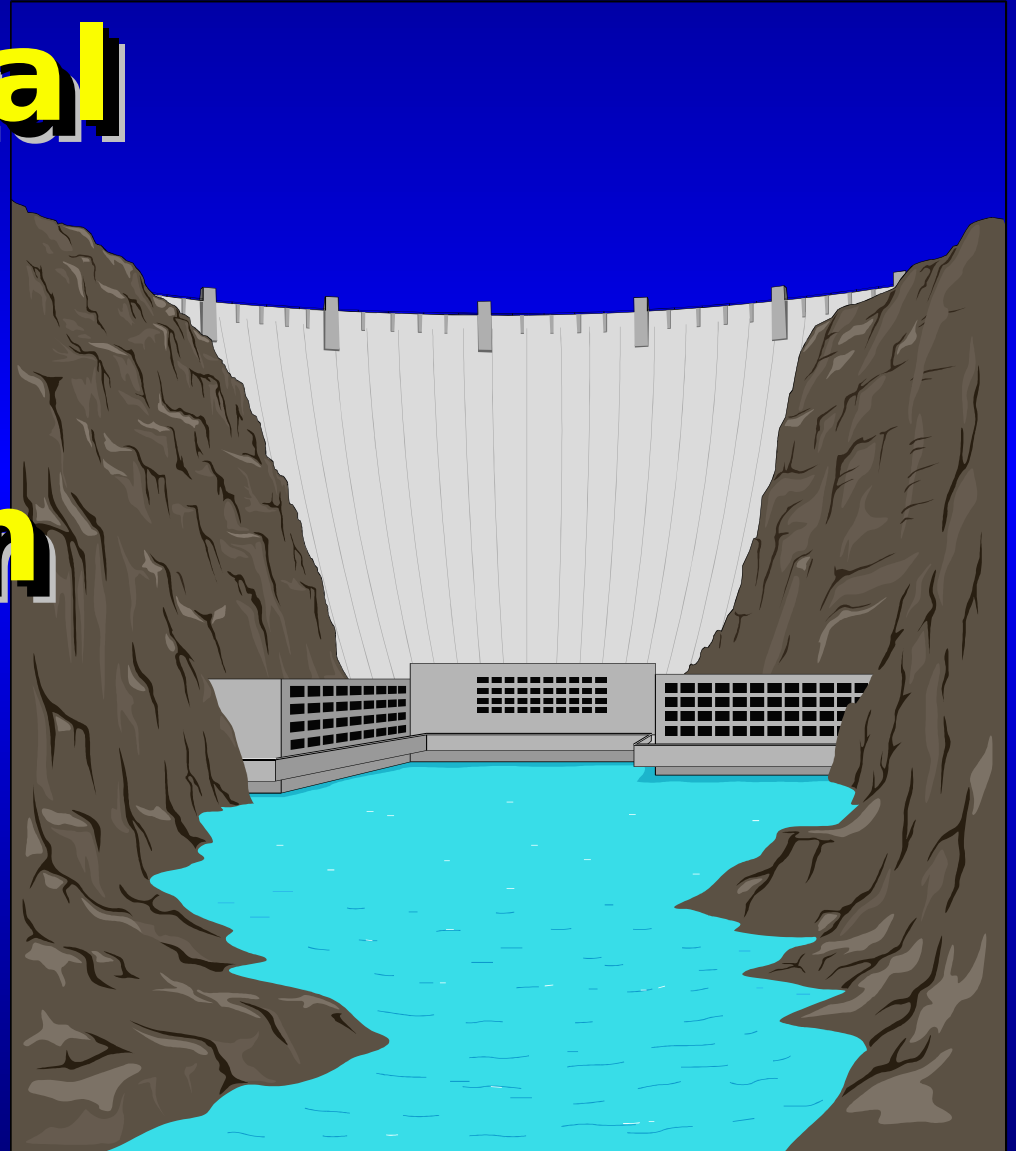
**Brandon Road Lock &
Dam
Illinois River**

Small Boat
Commercial
Navigation (Alaska)



Wrangell and Heritage Harbors, Wrangell Alaska

Flood Risk Management & Coastal Storm Damage Reduction





**American River,
Sacramento, CA - Jan.-
Feb. 1997**

An aerial photograph showing the Boeing Plant and Renton Airport. The image captures a large industrial facility with several large hangars and parking lots filled with cars. Several commercial airplanes are parked on the tarmac. A road runs through the center of the image, separating the plant from the airport. The surrounding area includes some greenery and a few smaller buildings.

Boeing
Plant
737-757
Production
and
Renton
Airport

Cedar
River &
Lake
Washington
n

Seattle



New Orleans Flooding,
2005
Residential Damages



Chehalis, Washington,
1996
Commercial/Industrial
Damages



Midwest Flooding,
1995
Agricultural Damages



Hurricane Damage -
North Carolina

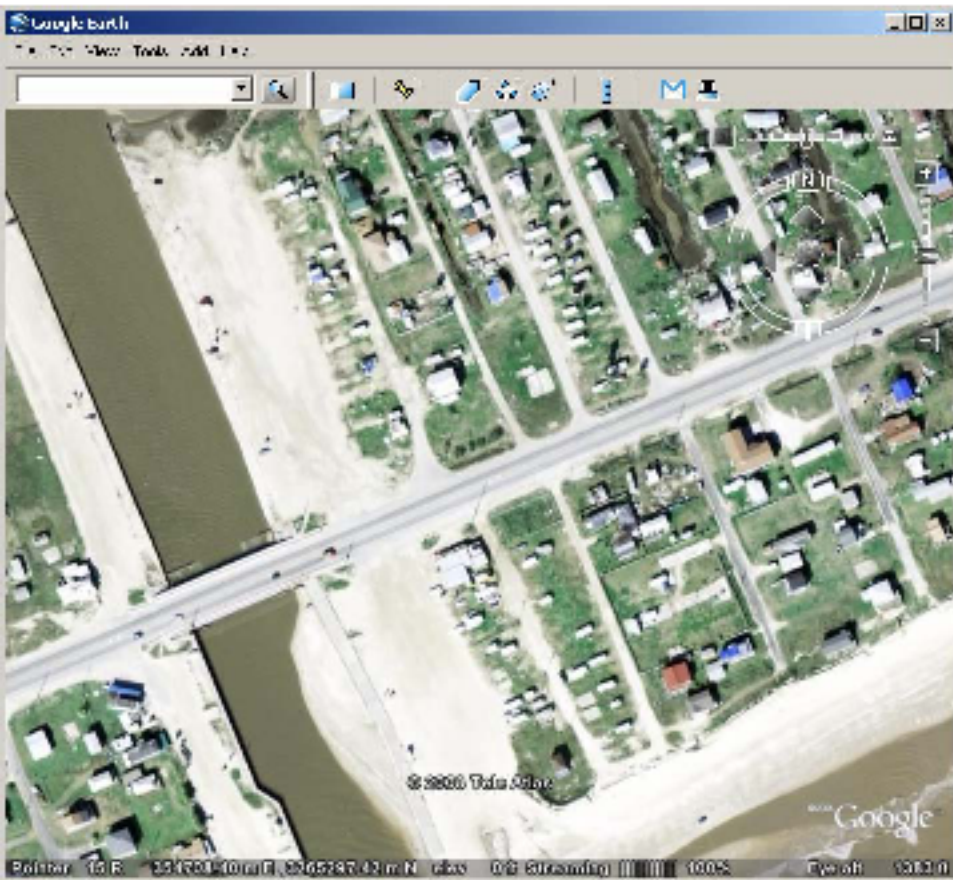
Shrimp fleet carried
two miles inland by
Hurricane Katrina



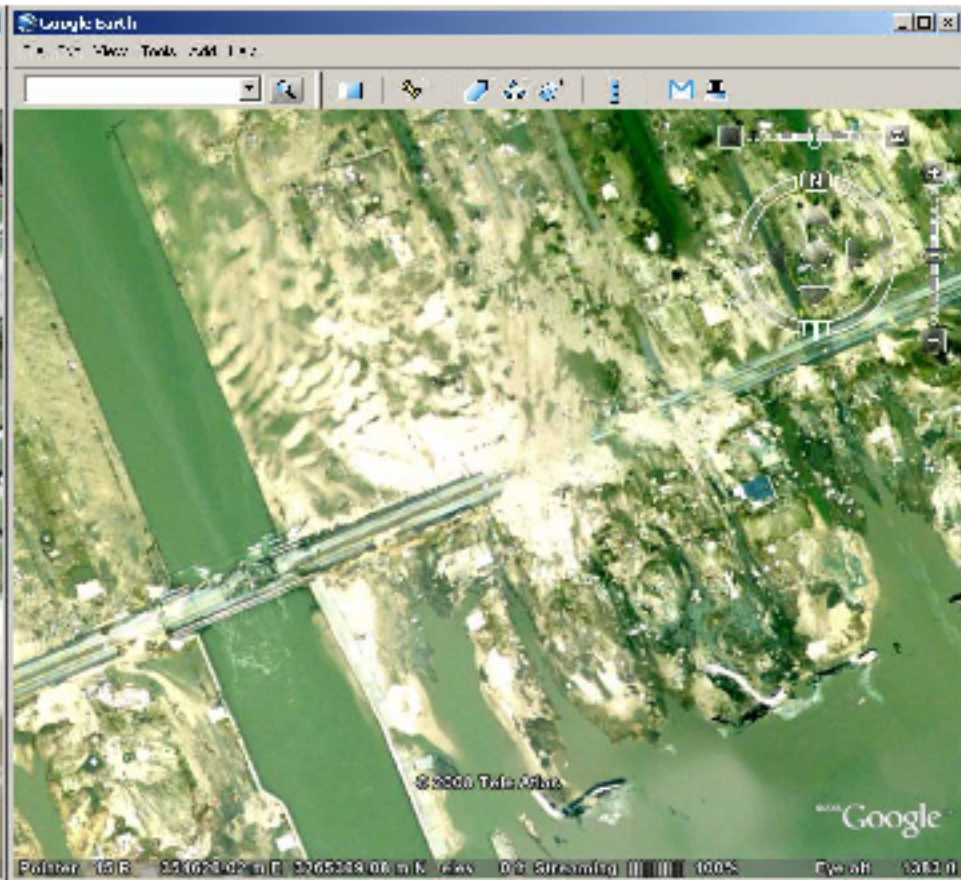
Hurricane Damage
2005 -
Gulf Coast



Gilchrist, TX



2008 Google Earth®



NOAA Imagery 14 Sept 2008

Hurricane Damage

2008



Storm Damage -
Great Lakes Region



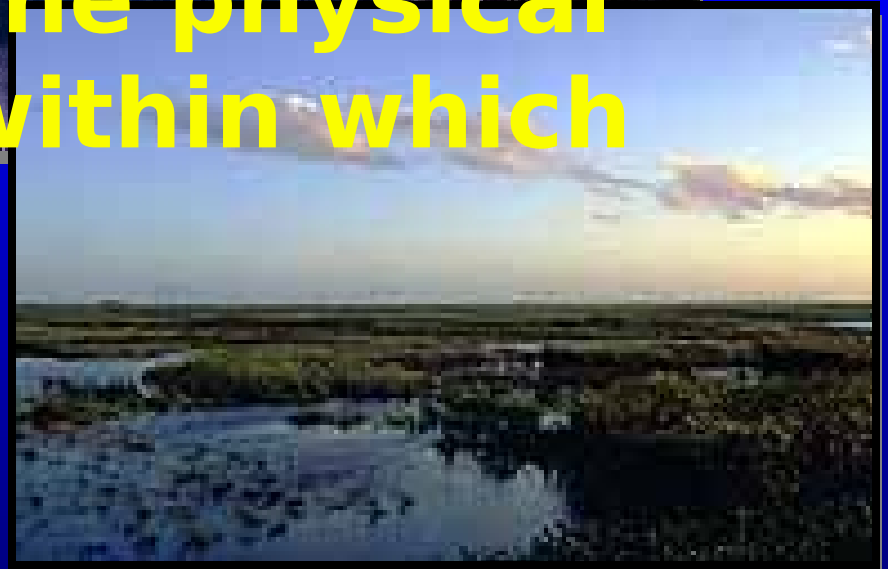
Flood Fighting /
Emergency
Operations



Ecosystem Restoration

What is an ecosystem ?

Interconnected community of living things, including humans, and the physical environment within which they connect.



What is Ecosystem Restoration ?

A return of a natural areas or ecosystems to a close approximation of its condition prior to disturbance, or to a less degraded, more natural condition by restoring significant ecosystem functions, structures, and dynamic processes.

~~Pollution Abatement~~

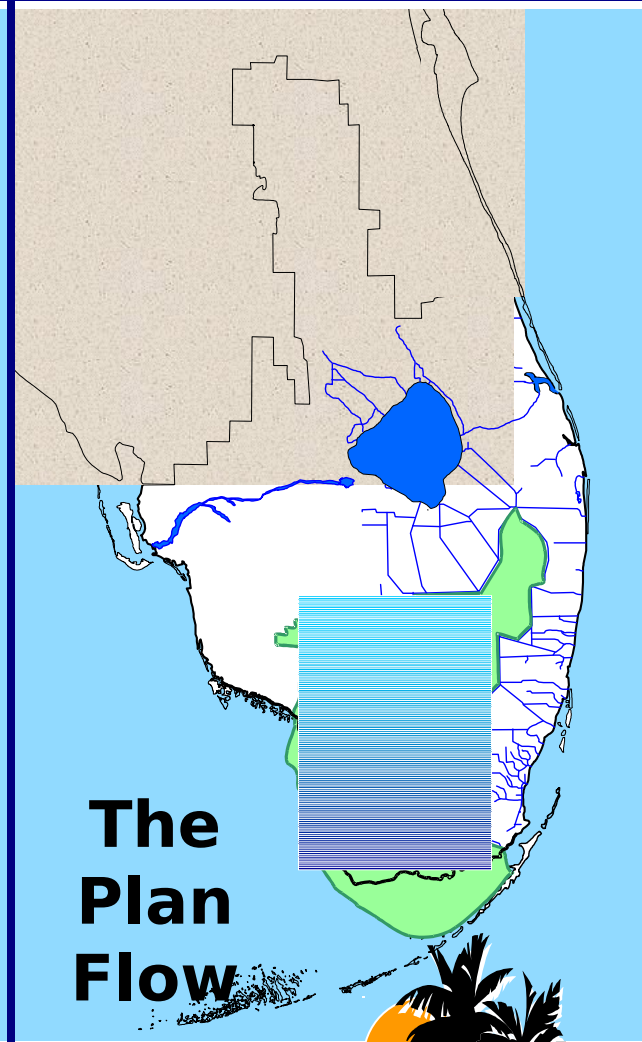
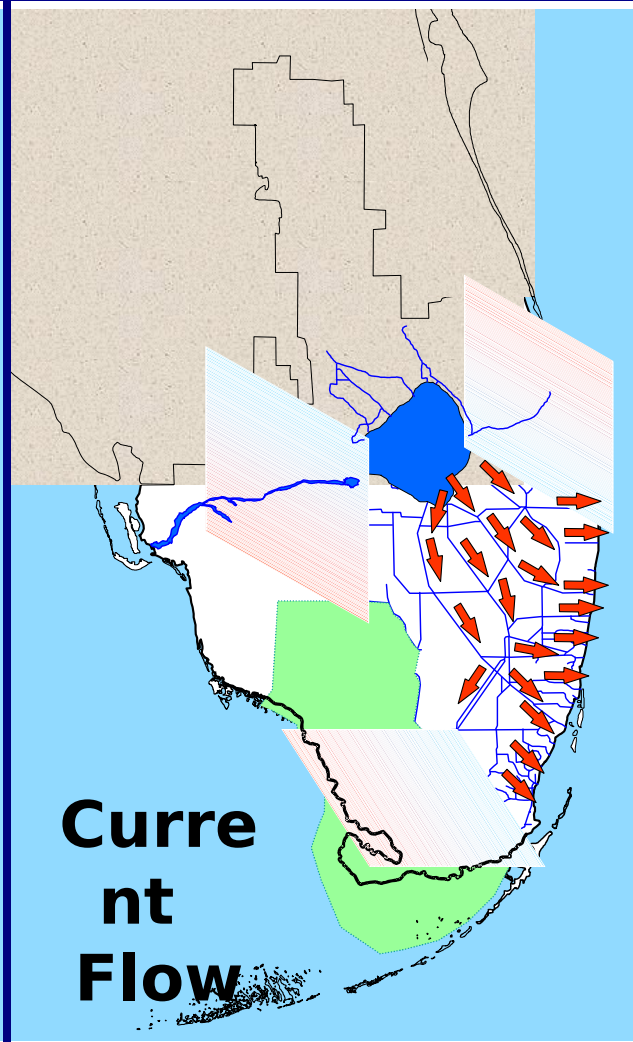
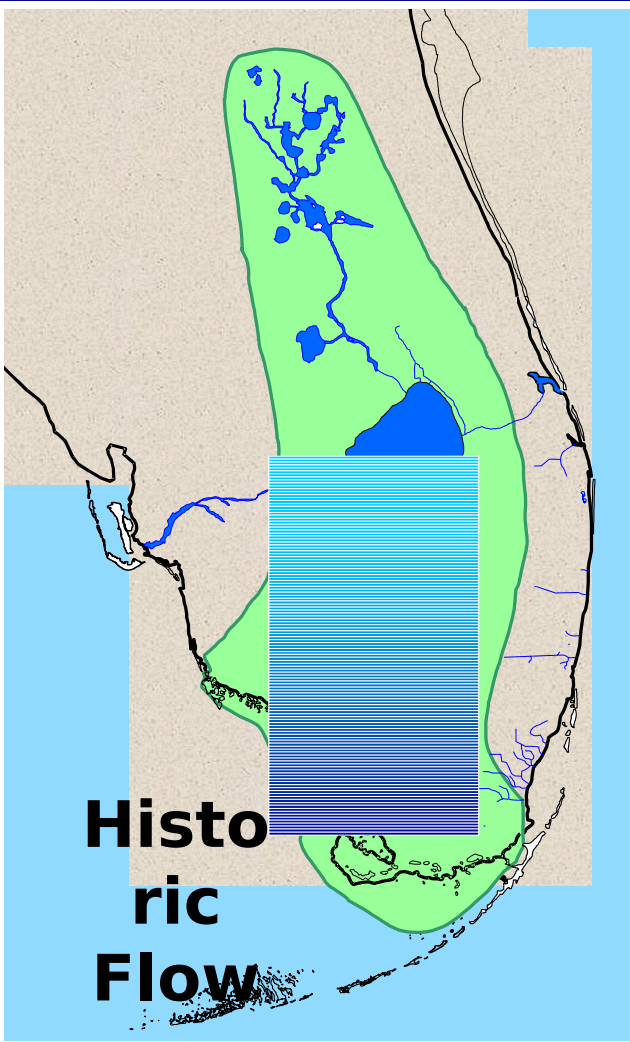
~~Mitigation~~

It is NOT !!!

~~Water / Sewer Treatment~~

Restoration Focus...in Civil Works

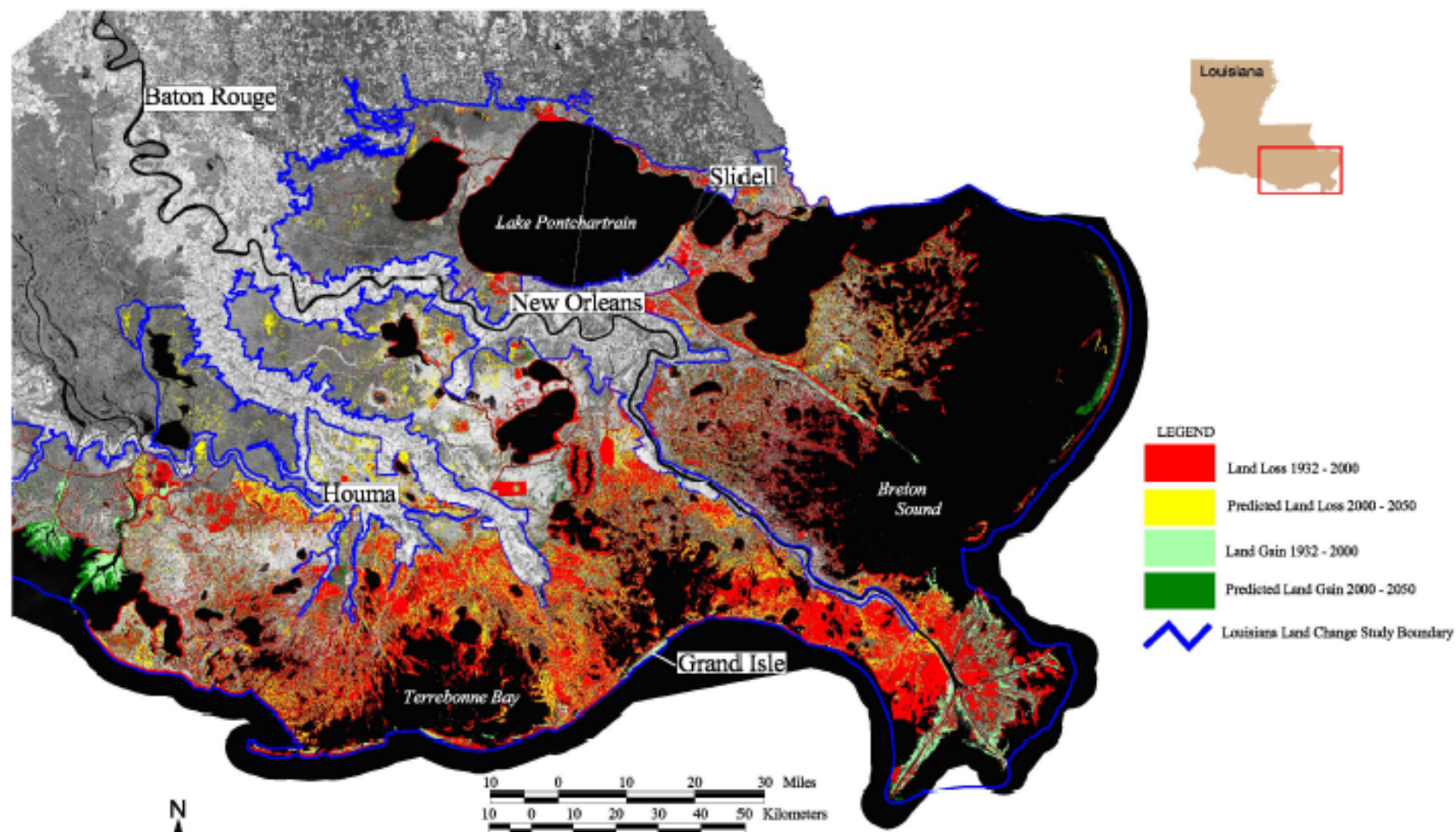
Activities will focus on engineering and other technical solutions to water and related land resources problems. The principal focus will be on the hydrologic regime of the watershed.



**“The First 800-lb
Gorilla”**

America’s Everglades are in Serious Peril





SUMMARY

Coastal Louisiana has lost an average of 34 square miles of land, primarily marsh, per year for the last 50 years. From 1932 to 2000, coastal Louisiana has lost 1,900 square miles of land, roughly an area the size of the state of Delaware. If nothing is done to stop this land loss, Louisiana could potentially lose approximately 700 square miles of land, or about equal to the size of the greater Washington D.C.-Baltimore area, in the next 50 years. Further, Louisiana accounted for an estimated 90 percent of the coastal marsh loss in the lower 48 states during the 1990s. The area shown on this map represents over 75 percent of the total land loss for coastal Louisiana. Backdrop is 2000 1M panchromatic band.

Prepared By:
U.S. Geological Survey
National Wetlands Research Center
Battyrin, LA



Map ID: USGS-NWRC 2003-03-0373

“The Next 800-lb Gorilla”

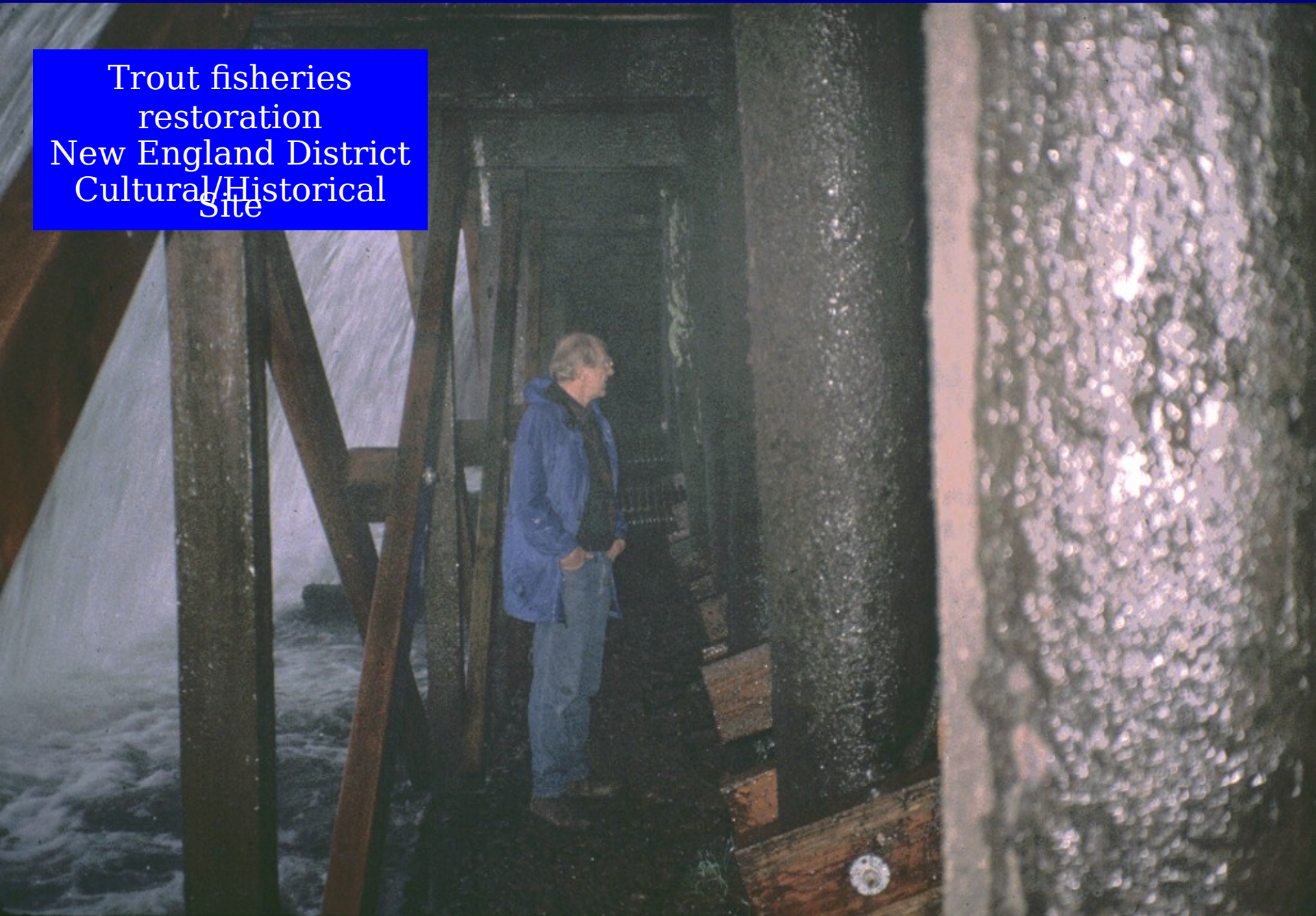


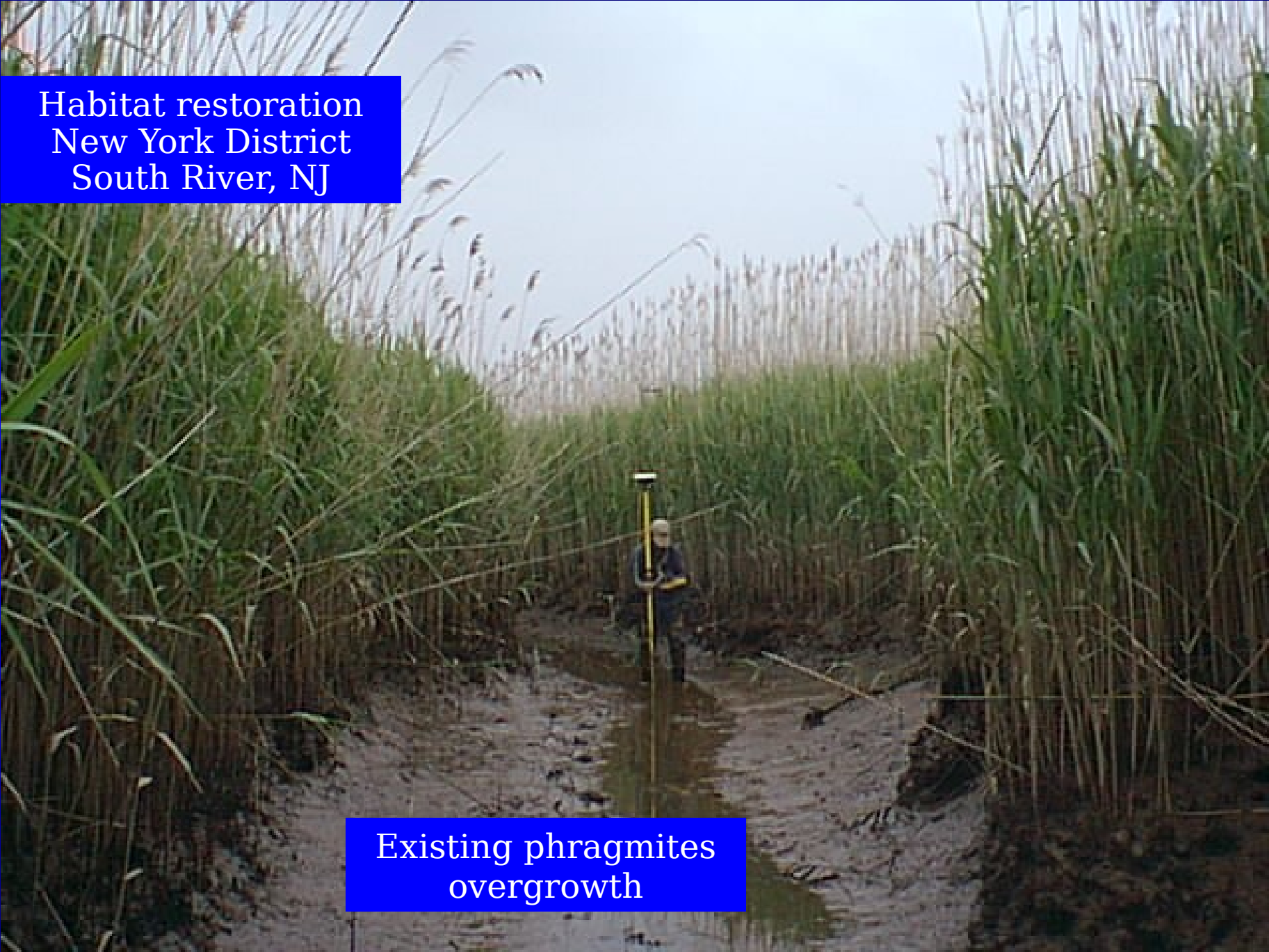
Cape May, NJ
Salt Marsh
Restoration

Trout fisheries
restoration
New England District
Cultural/Historical
Site



Trout fisheries
restoration
New England District
Cultural/Historical
Site





Habitat restoration
New York District
South River, NJ

Existing phragmites
overgrowth

Habitat restoration
New York District
South River, NJ

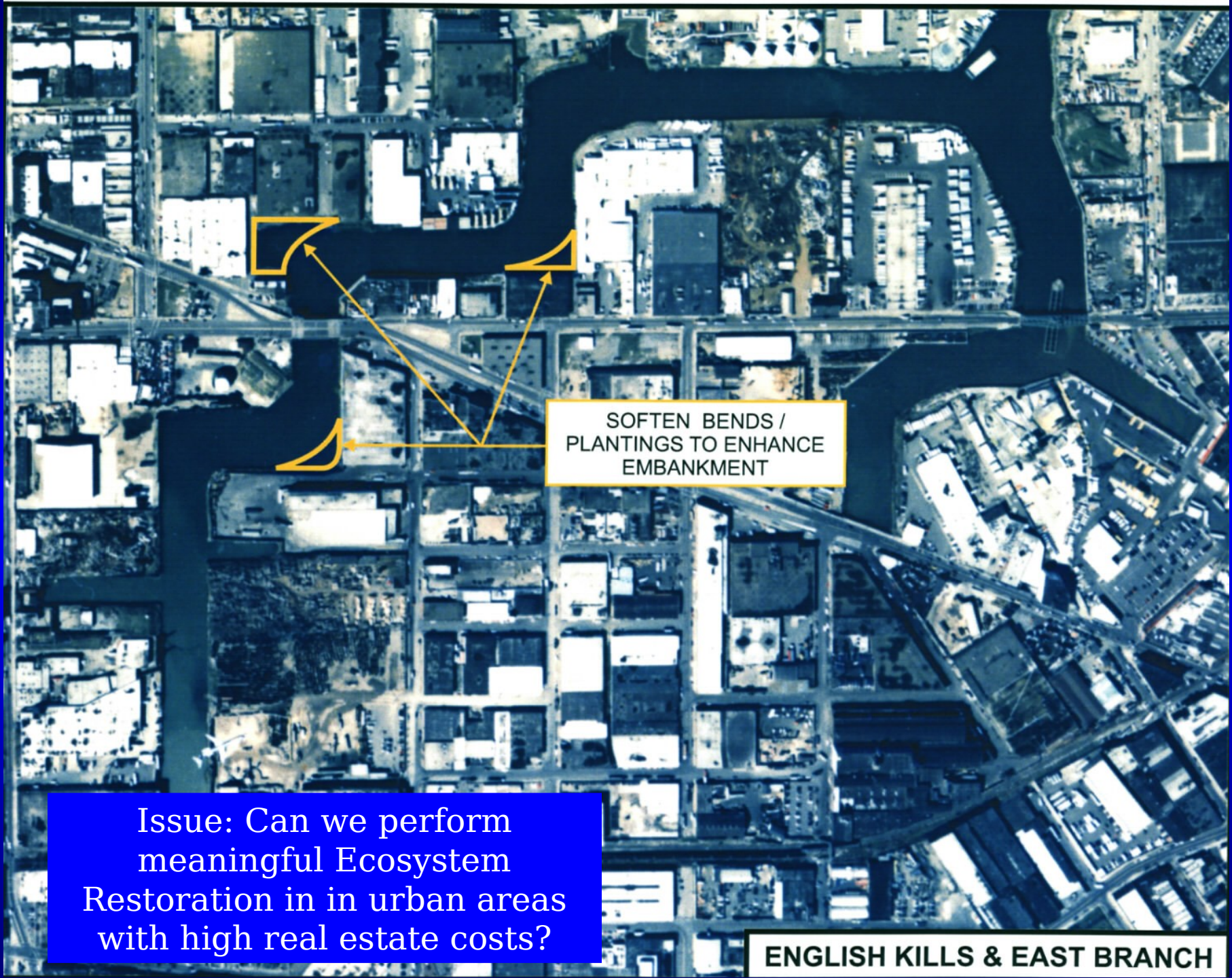
Goal to restore
mudflat



Habitat restoration
New York District
South River, NJ

Goal to restore open water
marsh areas





SOFTEN BENDS /
PLANTINGS TO ENHANCE
EMBANKMENT

Issue: Can we perform
meaningful Ecosystem
Restoration in urban areas
with high real estate costs?

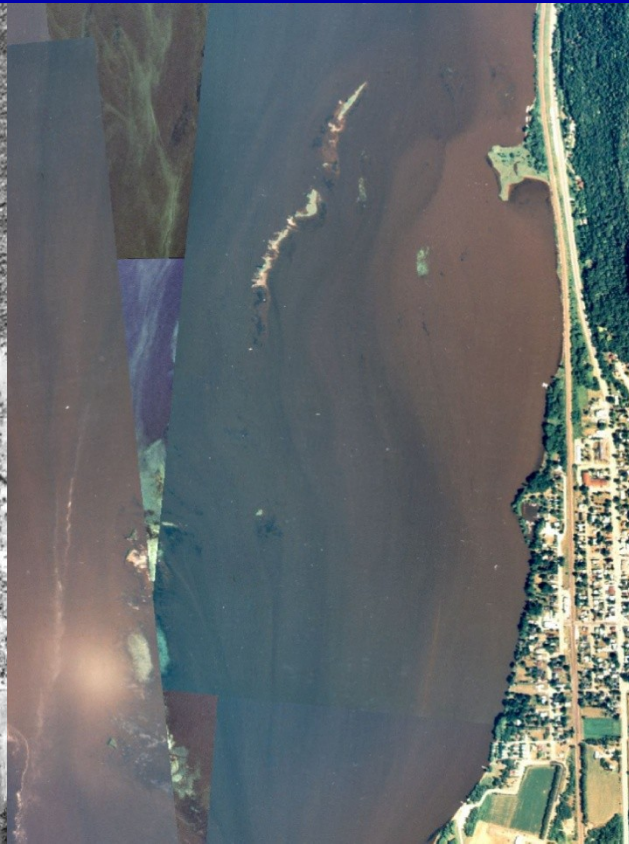
ENGLISH KILLS & EAST BRANCH

Island Protection and Restoration

Pool 8 Islands HREP Phase II,
near Stoddard, Wisconsin



October 1961



August 1994



August 2000

A photograph showing three people from behind, standing in a field of tall, green and yellowish grass. The person on the left is wearing a red and grey shirt and blue jeans. The person in the middle is wearing a light blue button-down shirt, brown pants, and a white cap. The person on the right is wearing a grey and black striped polo shirt and blue jeans. In the background, there are dense green bushes and trees under a clear sky. A blue text box is overlaid in the top right corner.

Wetland Restoration Seattle District

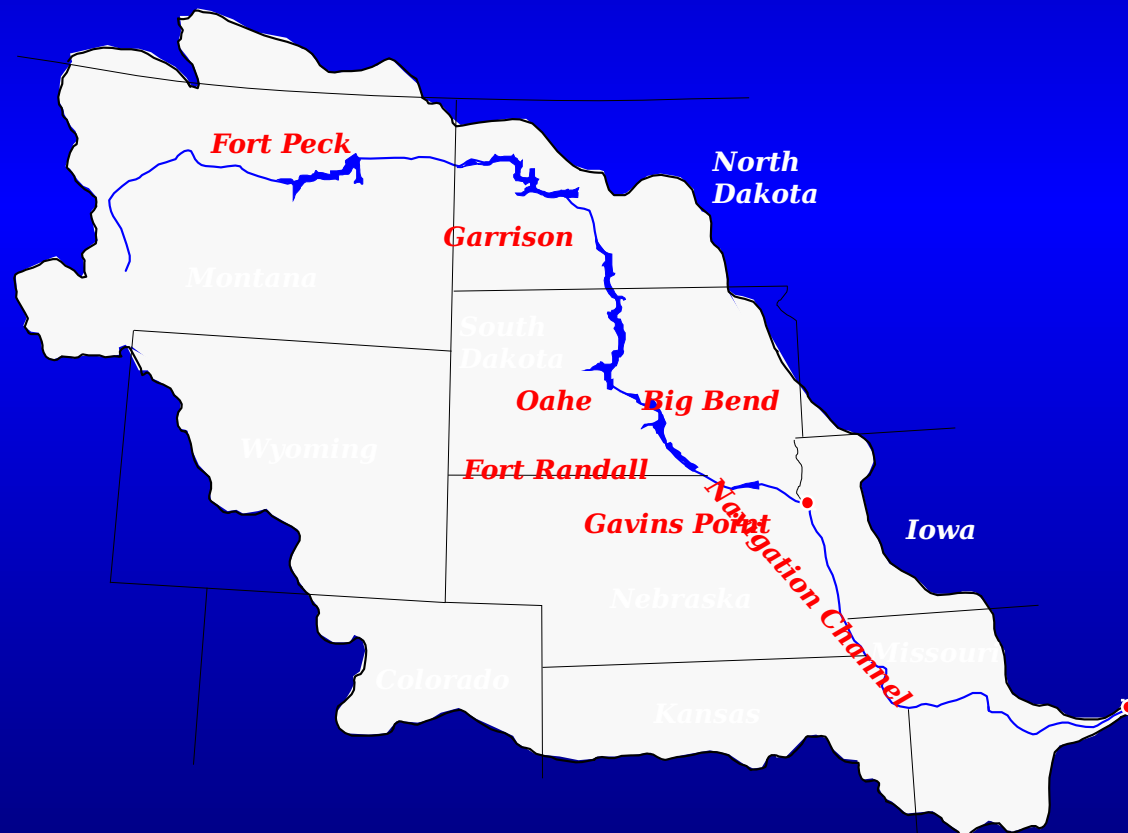


Watershed Planning

(aka Integrated Water Resources Management)

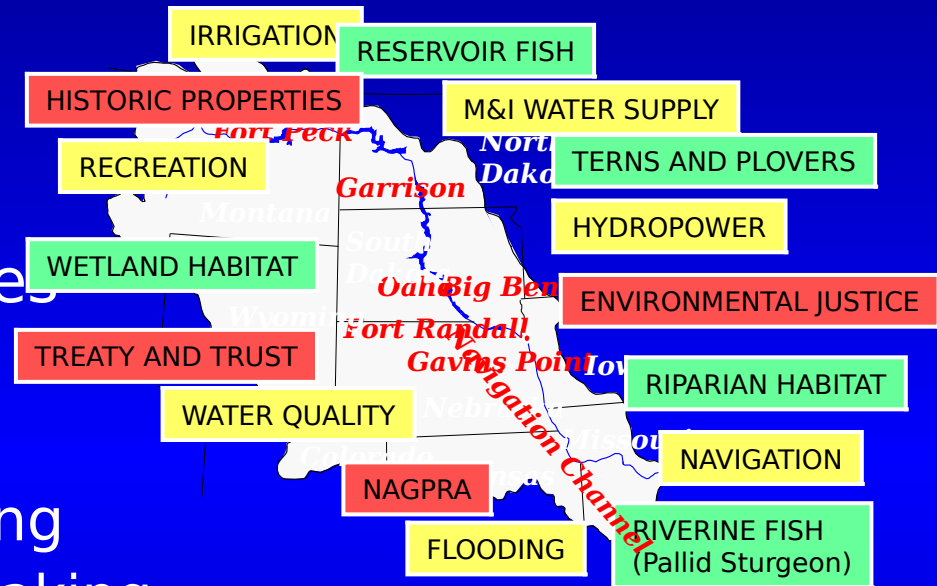
What is a watershed?

From the hydrologic standpoint, it is the geographic area in which all water flows to a common point



Watershed Planning

- Collaborative approach
(EC 1105-2-409)
- Integrated Water Resources Management
 - Systems Approach
 - Collaboration & Partnering
 - Risk-Informed Decision Making & Communication
 - Adaptive Management
- Multi-purpose, multi-objective
- Sustainable



New Operating Reality

Traditional USACE Role



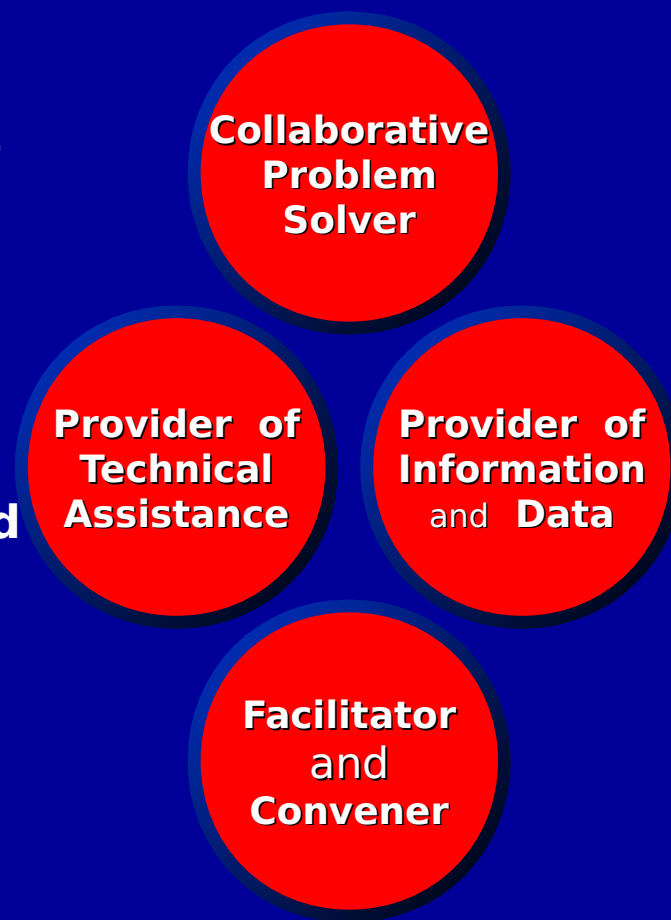
Era of large federal,
single-purpose water
projects is over.

.....
Role of USACE as
sole decision maker
and technical expert
for water solutions
is changing

.....
Water resources
community
recognizes need for
more transparency and
engagement in
water resources
Planning

.....
There is a need and
more desire for
collaborative regional
planning

New / Renewed USACE Role

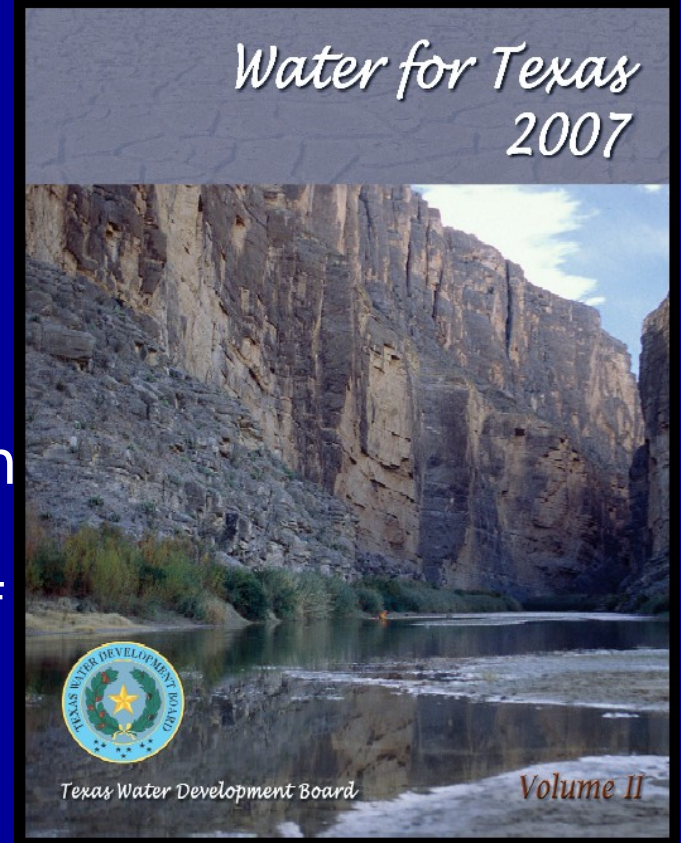


New Thinking

Focus	From	To
<ul style="list-style-type: none"> • SUCCESS = • CRITERIA • WORK • KNOWLEDGE • STYLE • MONEY • LIFE CYCLE 	<ul style="list-style-type: none"> • Projects • NED benefits 1st • Stay in your functional lane • Knowledge is power • Follow SOPs as recipes • Save Federal \$ • Plan and build 	<ul style="list-style-type: none"> • Comprehensive Plans w/ Projects • More balanced NED, RED, EQ, OSE benefits • Seek horizontal and vertical integration • Share knowledge • Think creatively, consider risks, think systems • Leverage resources • Plan, fund, monitor for full project life cycle

Operating Premises

- Water conflicts will persist
- Responsibility will continue to be shared
- Improved intergovernmental cooperation is essential
- Improved water resources planning is critical
- States must do the lion's share of water resources planning
- There is a Federal interest in supporting state water resources planning
- The Corps and Interstate entities can support state water resources planning with states in the lead



How We Achieve Our

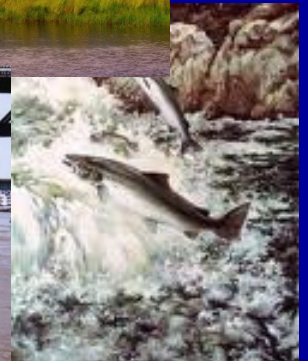


Integrated Water Resource Management

- **Systems Approach**
- **Collaboration & Partnering**
- **Risk-Informed Decision Making & Communication**
- **Adaptive Management**
- **State-of-the Art Technology**

Our Strategy: Integrated Water Resources Management

IWRM = a holistic focus on water resource challenges and opportunities that reflects coordinated development and management of water, land and related resources that maximizes economic services and environmental quality, ensures public safety, and provides for the sustainability of vital ecosystems



Systems Approach

- Look at river basins, watersheds and coastal zones as a whole
- Shift focus from individual projects to interdependent system
- Shift from immediate to long-term solutions
- Recognize that any single action triggers one or more responses and reactions in other parts of the system



Collaboration &

Partnering

- Allow multiple organizations to contribute to problem-s
- Leverage funding, data and t
 - Efficiencies, given scarce resources
 - Sophisticated state and interstate organizations
 - Tribes, local governments, non-profit organizations
 - Public-Private Partnerships



Risk-Informed Decision Making

Consequence analysis

especially risks to populations

Forestall possible failure mechanisms

Quantify & communicate residual risk

Ask which projects will fail to perform as designed, the likelihood of failure, and the consequences

Recognize limits in disaster prediction

Recognize limits in protection provided by structural means



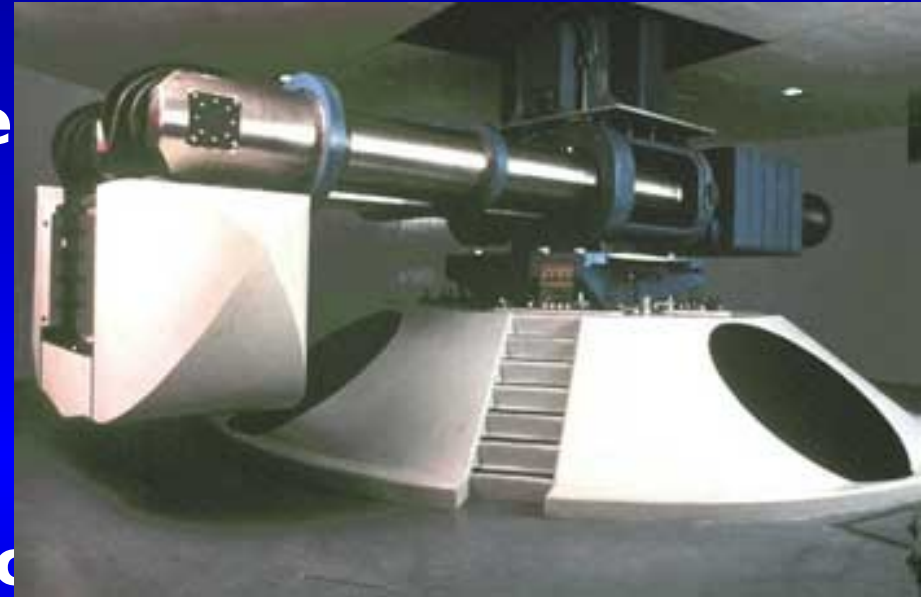
Adaptive Management



- Principle commonly used in ecosystem restoration
- Measure responses to interventions within systems to adjust planning, construction and operations in response to changing conditions.

State-of-the Art Technology

- Research that improves
• resiliency of structure
- Updated design criteria
- Improved approaches to
• planning & design
- Take advantage of
• advances in communication
information access, remote sensing, GIS's
& nanotechnology
- Coastal & River Information System



Watershed Planning

Sustainability (ER 200-1-5)

A process whereby environmental and economic considerations are effectively balanced in project planning, design, construction, operation and maintenance ...



... Not “bolted on” at the end

(More in Module
15)

A Multiple-Purpose River Basin Development

"Finally, I urge the Congress to develop more satisfactory procedures for considering and authorizing basin-wide development programs. We are a long way still, both in the Executive and Legislative Branches, from the kind of comprehensive planning and action that is required if we are to conserve, develop and use our natural resources so that they will be increasingly useful as the years go by. We need to make sure that each legislative authorization and each administrative action, takes us toward -- and not away from -- this goal."

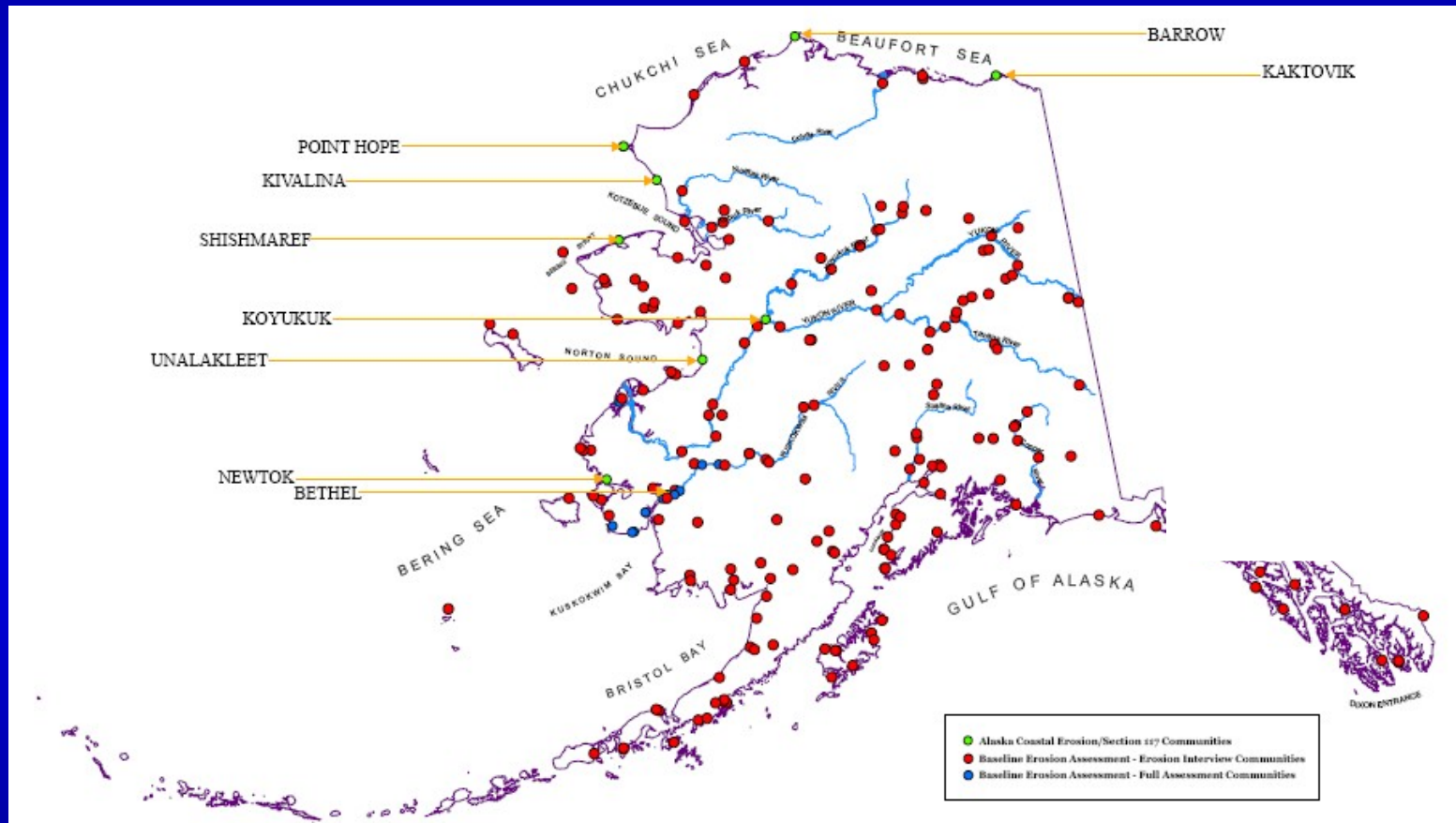
Harry S. Truman, 1950

Missouri River Authorized Purposes Study

A real life water war



Alaska Baseline Erosion Assessment



Regional Water Resources Challenges

- Asian Carp (Great Lakes/Mississippi River)
- Vegetation on Levees (CA, TX)
- ACT/ACF Basins (GA, AL, FL)
- Everglades Restoration
- Great Lakes - Lake Levels
- Chesapeake Bay
- Bay Delta, CA
- Columbia Fish Program (OR, WA, ID)
- Coastal Louisiana
- Ohio River Basin



Watershed Summary

- **Provide integrated water management through a watershed approach and integrated life-cycle infrastructure management**
- **Employ smarter regional planning**
- **Ensure public safety through risk assessment and vigilance of our water infrastructure**
- **Seek innovative financing**
- **Invest in science, technology, and information management**
- **Improve intergovernmental, inter-organizational cooperation**
- **Develop stronger partnerships for collaborative problem-solving**
- **Plan for hiring, training and retaining to maintain a competitive edge**

The HOW Part ?



- ▣ Specifically authorized General Investigations?
- ▣ Miscellaneous General Investigations?
- ▣ Continuing Authorities Program?

PLANNING PROGRAMS:

GENERAL INVESTIGATIONS

- Specifically authorized (“named”) studies**
- Section 206 Flood Control Act of 1960**
 - Flood Plain Management Services**
- Section 216 Flood Control Act of 1970**
 - Review of Completed Projects**
- Section 22 WRDA 1974 - Planning Assistance to States**

GENERAL INVESTIGATIONS:

▮ Specifically Authorized (or “Named”) Studies:

- ▮ Generally for larger, complex projects
 - ▮ 100% Federally funded reconnaissance phase
 - ▮ 50/50 cost shared feasibility phase
 - ▮ 75/25 cost shared preconstruction engineering & design phase
 - ▮ Project implementation - see Module 24

GENERAL INVESTIGATIONS:

Floodplain Management Services (FPMS)

- Section 206 Flood Control Act 1960**
- Public understanding of flood hazards**
- Promote prudent use and management of the Nation's floodplains.**
- Typical district annual allocation < \$50,000
(FY10 Program: \$8.1M)**
- No cost sharing required for state, regional, or local governments.**

GENERAL INVESTIGATIONS:

▮ **Review of Completed Projects**

▮ **Section 216 Flood Control Act 1970**

- ▮ **Program to review the operation of completed Federal projects and to recommend modifications...**
 - "when found advisable due to significantly changed conditions
 - "for improving the quality of the environment in the public interest".
- ▮ **Initial Appraisal Completed using O&M funds.**
- ▮ **Follow-on GI funding if warranted.**

(More in Module
25)

GENERAL INVESTIGATIONS

▮ **Planning Assistance to States**

- ▮ **Section 22 WRDA 1974**

- ▮ **Program to assist States, local governments, and non-Federal public entities in the preparation of comprehensive plans for the development, utilization, and conservation of water and land related resources.**

- ▮ **Program is annually funded by Congress**

- ▮ **FY08 Appropriation - \$6,396,000**

- ▮ **FY09 Appropriation - \$6,593,000**

- ▮ **FY10 Appropriation - \$7,161,000**

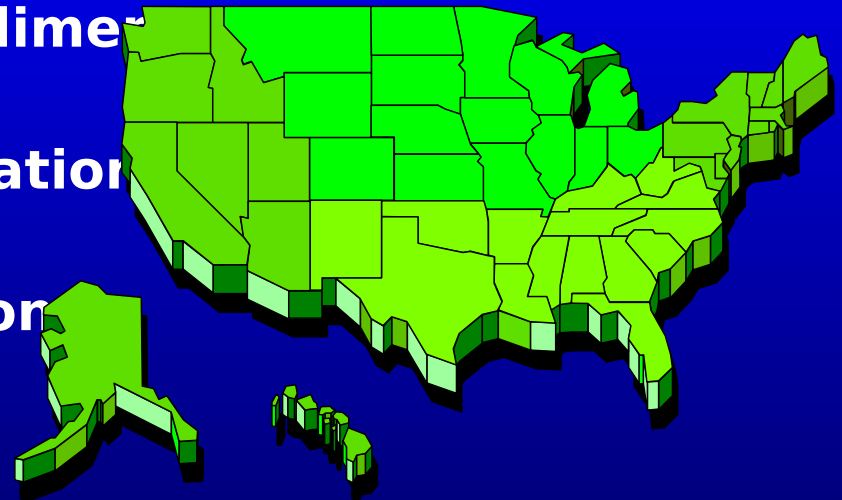
- ▮ **\$2,000,000 - Maximum per state &**

GENERAL INVESTIGATIONS:

▮ **Planning Assistance to States**

▮ **Typical Studies:**

- ▮ **Water Supply & Demand**
- ▮ **Groundwater**
- ▮ **Dam Safety/Failure (non-Corps constructed)**
- ▮ **Recreation Master Plans**
- ▮ **Erosion and Sedimentation**
- ▮ **Water Quality**
- ▮ **Wetlands Evaluation**
- ▮ **Floodplains**
- ▮ **NFIP Certification**



GENERAL INVESTIGATIONS:

▮ **Misc GI**

▮ **Other Activities:**

- ▮ **Coastal Field Data Collection (FY10 \$4.5M)**
- ▮ **Coordination Studies with other Agencies (FY10 \$3.7M)**
- ▮ **Research and Development (FY10 \$20.5M)**
- ▮ **Stream Gaging (USGS) (FY10 \$0.5M)**

PLANNING PROGRAMS:

(Cont.'d)

▮ CONTINUING AUTHORITIES: (More in Module 27)

- ▮ Section 3 River and Harbor Act of 1945 - Emergency Clearing & Snagging Navigation
- ▮ Section 14 Flood Control Act of 1946 - Emergency Streambank Protection Projects
- ▮ Section 103 River and Harbor Act of 1962 - Small Beach Erosion Control
- ▮ Section 107 River and Harbor Act of 1960 - Small Navigation

PLANNING PROGRAMS:

(Cont.'d)

▮ CONTINUING AUTHORITIES: (cont.'d)

- ▮ Section 204 Water Resources Development Act of 1992 -
Aquatic/Ecological Habitat
Protection, Restoration & Creation
- ▮ Section 205 Flood Control Act of 1948
- Small Flood Control
Projects
- ▮ Section 206 Water Resources Development Act of 1996-
Aquatic Ecosystem and Estuary
Restoration

PLANNING PROGRAMS:

(Cont.'d)

CONTINUING AUTHORITIES: (cont.'d)

- Section 208 Flood Control Act of 1954- Clearing and Snagging Projects
- Section 1135 Water Resources Development Act of 1986 - Environment



SUMMARY:

- ▮ **STEP 1 - Identification of Problems**
- ▮ **Non-Federal SPONSORS - Who?**
- ▮ **Types of problems - Where?**
- ▮ **High priority missions - What?**
- ▮ **Corps Authorities - How?**

